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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/047,826      | 10/23/2001  | Jeffrey B. Hoke      | 4569C (CIP)         | 7857             |

7590 05/21/2003  
Engelhard Corporation  
101 Wood Avenue  
P.O. Box 770  
Iselin, NJ 08830

EXAMINER

MEDINA SANABRIA, MARIBEL

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1754

DATE MAILED: 05/21/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/047,826

Applicant(s)

HOKE ET AL

Examiner

Maribel Medina

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10/23/01.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

**Claim Rejections - 35 USC § 102**

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, 10 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4,806,517 (Vanderpool et al).

Instant claim 1 and 10 recites the limitation “exposing the catalyst material to a (substantially (instant claim 10)) continuous flow of gaseous composition, the gaseous composition comprising a substance which deactivates the catalyst material”. Instant claims 5 and 14 recite the limitation “wherein the gaseous composition is ambient air.”

Vanderpool et al disclose a process for the accelerated aging of a catalyst by holding the catalyst without a feed mixture for a period of about 2 weeks (See col. 31, lines 25-51).

Vanderpool has been interpreted as being exposing the catalysts to the accelerated aging in an ambient air, since it is not subject to any liquid feed mixture (comprising ethylenediamine and monoethanolimine), therefore Vanderpool et al meet the limitation of claims 5 and 14. In regards to the limitation of claims 1 and 10, Vanderpool et al also meet the claimed limitations since the ambient air, is a continuous flow (flowing for 2 weeks), which deactivates the catalyst material. No difference is seen between the instant claims and Vanderpool et al disclosure.

3. Claims 1, 6, 7, 10, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Engler et al.

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Instant claim 1 and 10 recites the limitation “exposing the catalyst material to a (substantially (instant claim 10)) continuous flow of gaseous composition, the gaseous composition comprising a substance which deactivates the catalyst material”.

Engler et al disclose a process for aging a catalyst in an engine, wherein the aging is carried out for 85 hours the engine having a stoichiometric exhaust gas composition ( $\lambda=1$ ) and an exhaust-gas flow space velocity of 160,000 liters of gas per hour-liter of catalyst volume (See col. 7, lines 35-52).

In regards to claims 1 and 10, Engler et al disclose contacting the catalyst for 85 hours with the exhaust-gas flow as described above, this flow is a continuous flow, which clearly comprises substances that deactivates the catalyst.

In regards to claims 6, 7, 15 and 16, engine exhaust gases inherently contain particulate matter and aerosols.

No difference is seen between the instant claims and Engler et al disclosure

4. Claims 1-3, 6, 7, 10-12, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 4,370,260 (Kim).

Instant claim 1 and 10 recites the limitation “exposing the catalyst material to a (substantially (instant claim 10)) continuous flow of gaseous composition, the gaseous composition comprising a substance which deactivates the catalyst material”.

Kim discloses a process for the accelerated aging of a catalyst in a standing engine dynamometer, wherein the aging is carried out for 190 hours, the engine exhaust-gas flow space velocity of 36,700 liters of gas per hour-liter of catalyst volume and a composition comprising n-

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hexane containing 0.10 g Pb/gal; 0.25 g P/gal and 0.04 Wt.% S (See col. 8, lien 66- col. 9, lines 1-15).

In regards to claims 1 and 10, Kim discloses contacting the catalyst for 190 hours with the exhaust-gas flow as described above, this flow is a continuous flow, which clearly comprises substances that deactivates the catalyst.

In regards to claims 2-3 and 11-12, Kim discloses that the catalyst comprises a refractory oxides such as silica-alumina, and comprising a palladium platinum or rhodium metal (See col. 2, lines 40-45 and col. 6, lines 10-15).

In regards to claims 6, 7 and 15 and 16, the exhaust contains Pb, S and, which are particulate matters or aerosols.

No difference is seen between the instant claims and Engler et al disclosure

**Claim Rejections - 35 USC § 103**

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 8-9, 13, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanderpool et al, Kim, and Engler et al


Vanderpool et al, Kim and Engler et al apply herein as above. The cited prior art to discloses accelerated aging of different catalyst compositions. However fails to disclose treating a catalyst comprising cyptomelane.

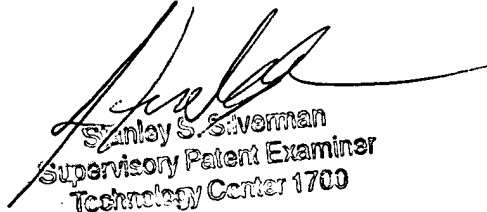
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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have treated any catalyst, such as one comprising cryptomelane, with the accelerated aging method disclosed by the prior art cited, since this is a common and known method for aging catalysts.

**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner Maribel Medina. The examiner can normally be reached on Monday through Friday from 7:30 AM to 3:30 PM. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Examiner: Maribel Medina   
Tel: 703-305-1928  
Fax: 703-872-9310  
May 15, 2003

  
Stanley S. Siverman  
Supervisory Patent Examiner  
Technology Center 1700